

In The Claims

Kindly enter the claim amendments, without prejudice, as set forth below. A complete listing of the claims is provided, with a parenthetical indication of the status of each claim, and markings to show current changes.

1. (currently amended)

~~_____ In the network system~~

~~_____ A system for the cross-correlation of data, comprising:~~

~~_____ that n (n is any real number of 2) number of computers PC_i, (integer i represents the number of PC_i from 0 to n-1)~~

~~_____ a plurality n of computers PC_i, n being a real number which is equal to or greater than 2, and i being an integer from 0 to n-1;~~

~~are connected to a line concentrator or communications network that has a switching function;~~

~~_____ wherein said plurality n of computers PC_i are communicably coupled via a connector with a switch;~~

~~the data distribution method is characterized in that each computer PC_i has a storage device that is responsible for storing data X_i (i is an integer from 0 to n-1) that is to be cross correlated;~~

~~_____ each of said plurality n of computers PC_i further including a storage device configured for storing data X_i;~~

~~the data X_i noted above on each PC_i can be divided into n partial data X_i(j) (j is an integer from 0 to n-1);~~

~~_____ data X_i being divisible into n partial data units X_i(j), j being an integer from 0 to n-1;~~

~~_____ data X_i being divisible into n partial data units X_i(k), k being an integer from 0 to n-1;~~

~~computer PC_k (k is an integer from 0 to n-1) is responsible for the cross correlation processing of partial data X_i(k) located on each computer PC_i~~

~~_____ a computer PC_k, wherein computer PC_k is configured for cross-correlation processing of partial data X_i(k);~~

~~and further, in each pair including 2 computers which are connected to be able transmit data via the line concentrator or communications network noted above, mutually between 2 computers which are connected,~~

wherein each computer PC_i of said plurality n is configured to exchange a partial data unit with a partner computer chosen from said plurality n of computers; and

~~the computer repeats steps that computers transmit their allocated partial data to the partner computer which is connected to said computer between each other.~~

wherein each computer PC_i of said plurality n is configured to exchange additional partial data units with a partner computer chosen from said plurality n of computers.

2. (currently amended) ~~The data distribution method according to~~ The system of claim 1,
wherein each computer PC_i of said plurality n is configured to exchange with a partner computer
~~wherein said step is repeated n-1 partial data units times if when n is even, and n partial data units times when if when n is odd, and each cycle of the step is repeated only between said pair of computers and a same pair of computers is allocated without overlapping through all of the steps.~~

3. (currently amended) ~~In the network system~~

A system for the cross-correlation of data, comprising:
that n (n is any real number of 2) number of computers PC_i, (integer i represents the number of PC_i from 0 to n-1);

a plurality n of computers PC_i, n being a real number which is equal to or greater than 2,
and i being an integer from 0 to n-1;

~~are connected to a line concentrator or communications network capable of full duplex transmission with switching function;~~

wherein said plurality n of computers PC_i are communicably coupled via a connector configured for full duplex transmission and configured for a switching function;

~~the data distribution method is characterized in that each computer PC_i has a storage device that is responsible for storing data X_i (i is an integer from 0 to n-1) that is to be cross correlated;~~

each of said plurality n of computers PC_i further including a storage device configured for storing data X_i;

the data X_i noted above on each PC_i can be divided into n partial data X_i(j) (j is an integer from 0 to n-1);

data X_i being divisible into n partial data units X_i(j), j being an integer from 0 to n-1;

data X_i being divisible into n partial data units X_i(k), k being an integer from 0 to n-1;

computer PC_k (k is an integer from 0 to n-1) is responsible for the cross-correlation processing of partial data X_i(k) located on each computer PC_i; and

a computer PC_k, wherein computer PC_k is configured for cross-correlation processing of partial data X_i(k);

further, in computers which are connected to be able transmit data via the line concentrator or communications network noted above, in repeating the step that computers transmit their allocated partial data between the computer which sends data and the computer which receives data, during each step, same computer for sending and same computer for receiving are allocated without overlapping and same computers are allocated without overlapping through all of the steps, and these steps are repeated n-1 times, regardless of whether n being even or odd.

wherein each computer PC_i of said plurality n is configured to exchange n-1 partial data units with a partner computer; and

wherein each computer PC_i of said plurality is configured to exchange partial data units with each partner computer once.

4. (currently amended) In the network system

A system for the cross-correlation of data, comprising:

that n (n is any real number of 2) number of computers PC_i, (integer i represents the number of PC_i from 0 to n-1)

a plurality n of computers PC_i, n being a real number which is equal to or greater than 2, and i being an integer from 0 to n-1;

are connected to a line concentrator or communications network that has a switching function;

wherein said plurality n of computers PC_i are communicably coupled via a connector

with a switch;

~~the data distribution method is characterized in that each computer PC_i has a storage device that is responsible for storing data X_i (i is an integer from 0 to n-1) that is to be cross-correlated;~~

each of said plurality n of computers PC_i further including a storage device configured for storing data X_i;

~~the data X_i noted above on each PC_i can be divided into n partial data X_i(m) (m is an integer from 0 to n-1) having a size of unit data and can be divided into the block of every consecutive n of the partial data without overlapping;~~

data X_i being divisible into n partial data units X_i(m), m being an integer from 0 to n-1;

data X_i being divisible into n partial data units X_i(k), k being an integer from 0 to n-1;

~~computer PC_k (k is an integer from 0 to n-1) is responsible for the cross-correlation processing of partial data X_i(k) located on each computer PC_i;~~

a computer PC_k, wherein computer PC_k is configured for cross-correlation processing of partial data X_i(k);

~~and further, in each pair including 2 computers which are connected to be able transmit data via the line concentrator or communications network noted above, mutually between 2 computers which are connected;~~

wherein each computer PC_i of said plurality n is configured to exchange a partial data unit with a partner computer chosen from said plurality n of computers; and

~~the computer repeats steps that computers transmit their allocated partial data to the partner computer which is connected to said computer between each other.~~

wherein each computer PC_i of said plurality n is configured to exchange additional partial data units with a partner computer chosen from said plurality n of computers.

5. (currently amended) ~~The data distribution method according to system of claim 4,~~
~~comprising wherein the block of the α turn, (where α is being an integer of 0 and more),~~
~~wherein the α turn includes partial data units, numbering from $n \times \alpha$ to $(n \times \alpha + n - 1)$, and~~
~~comprising partial data unit X_i(k + $n \times \alpha$), the partial data unit X_i(k + $n \times \alpha$) being located on each~~
~~computer PC_i, wherein and the computer PC_k of the k turn is responsible is configured for the~~

cross correlation processing of partial data unit $X_i(k + n \times \alpha)$ ~~located on each computer PC_i.~~

6. (currently amended) ~~The data distribution method according to~~ A system according to ~~claims 4 or 5,~~

~~wherein said steps are applied to every block n-1 times if n is an even number, and n times if n is an odd number and each cycle of the step are repeated between the said pairs of computers assigned without overlapping, and all of the steps are repeated between said pairs assigned without overlapping.~~

wherein each computer PC_i of said plurality n is configured to exchange n-1 partial data units with a partner computer when n is an even number, and n partial data units with a partner computer when n is an odd number; and

wherein each computer PC_i of said plurality is configured to exchange partial data units with each partner computer once.

7. (currently amended) ~~In the network system~~

A system for the cross-correlation of data, comprising:

~~that n (n is any real number of 2) number of computers PC_i, (integer i represents the number of PC_i from 0 to n-1)~~

a plurality n of computers PC_i, n being a real number which is equal to or greater than 2, and i being an integer from 0 to n-1;

~~are connected to a line concentrator or communications network capable of full duplex transmission with switching function;~~

wherein said plurality n of computers PC_i are communicably coupled via a connector with a switch;

~~the data distribution method is characterized in that each computer PC_i has a storage device that is responsible for storing data X_i (i is an integer from 0 to n-1) that is to be cross-correlated;~~

each of said plurality n of computers PC_i further including a storage device configured for storing data X_i;

~~the data X_i noted above on each PC_i can be divided into n partial data X_i(m) (m is an integer~~

~~from 0 to n-1) having a size of unit data and can be divided into the block of every consecutive n of the partial data without overlapping;~~

~~_____ data X_i being divisible into n partial data units $X_i(m)$, m being an integer from 0 to n-1;~~

~~_____ data X_i being divisible into n partial data units $X_i(k)$, k being an integer from 0 to n-1;~~

~~computer PC_k (k is an integer from 0 to n-1) is responsible for the cross-correlation processing of partial data $X_i(k)$ located on each computer PC_i ;~~

~~_____ a computer PC_k , wherein computer PC_k is configured for cross-correlation processing of partial data $X_i(k)$;~~

~~and further, in computers which are connected to be able transmit data via the line concentrator or communications network noted above, in repeating the step that computers transmit their allocated partial data between the computer which sends data and the computer which receives data, during each step, same computer for sending and same computer for receiving are allocated without overlapping and same computers are allocated without overlapping through all of the steps;~~

~~_____ wherein each computer PC_i of said plurality n is configured to exchange a partial data unit with a partner computer chosen from said plurality n of computers;~~

~~and these steps are repeated n-1 times, regardless of whether n being even or odd.~~

~~_____ wherein each computer PC_i of said plurality n is configured to exchange n-1 partial data units with a partner computer; and~~

~~_____ wherein each computer PC_i of said plurality is configured to exchange partial data units with each partner computer once.~~

8. (currently amended) ~~The data distribution method~~ A system as in any one of the preceding claims, according to one of claims 1 to 7, in which the ~~that~~ computers PC_i of said plurality n used in this method are general purpose computers.

9. (currently amended) ~~The data distribution method according to one of claims 1 to 8~~ A system as in any one of the preceding claims, comprising a ~~that the~~ network medium allows configured for full duplex communications.

10. (currently amended) ~~The data distribution method according to one of claims 1 to 9~~ A
~~system as in any one of the preceding claims, in which that said data~~ data used in this method are
time series data recorded from radio telescopes.

11. (currently amended) ~~In the network system~~

A system for the cross-correlation of data, comprising:
~~that n (n is any real number of 2) number of computers PC_i, (integer i represents the number of~~
~~PC_i from 0 to n-1)~~

a plurality n of computers PC_i, n being a real number which is equal to greater than 2,
and i being an integer from 0 to n-1;

~~are connected to a line concentrator or communications network that has a switching function;~~

wherein said plurality n of computers PC_i are communicably coupled via a connector
with a switch;

~~the data distribution method is characterized in that each computer PC_i has a storage device that~~
~~is responsible for storing data X_i (i is an integer from 0 to n-1) that is to be cross correlated;~~

each of said plurality n of computers PC_i further including a storage device configured
for storing data X_i;

~~the data X_i noted above on each PC_i can be divided into n partial data X_i(j) (j is an integer from~~
~~0 to n-1);~~

data X_i being divisible into n partial data units X_i(j), j being an integer from 0 to n-1;

data X_i being divisible into n partial data units X_i(k), k being an integer from 0 to n-1;

~~computer PC_k (k is an integer from 0 to n-1) is responsible for the cross correlation processing~~
~~of partial data X_i(k) located on each computer PC_i and further;~~

a computer PC_k, wherein computer PC_k is configured for cross-correlation processing of
partial data X_i(k); and

~~in each pair including 2 computers which are connected to be able to transmit data via the line~~
~~concentrator or communications network noted above, mutually between 2 computers which are~~
~~connected;~~

wherein each computer PC_i of said plurality n is configured to exchange a partial data unit with a partner computer chosen from said plurality n of computers.

~~includes data transmission means which repeats steps that computers transmit their allocated partial data to the partner computer which is connected to said computer between each other.~~

12. (currently amended) ~~In the network system~~

A system for the cross-correlation of data, comprising:

~~that n (n is any real number of 2) number of computers PC_i, (integer i represents the number of PC_i from 0 to n-1)~~

a plurality n of computers PC_i, n being a real number which is equal to or greater than 2, and i being an integer from 0 to n-1;

~~are connected to a line concentrator or communications network that has a switching function;~~

wherein said plurality n of computers PC_i are communicably coupled via a connector with a switch;

~~the data distribution method is characterized in that each computer PC_i has a storage device that is responsible for storing data X_i (i is an integer from 0 to n-1) that is to be cross-correlated;~~

each of said plurality n of computers PC_i further including a storage device configured for storing data X_i;

~~the data X_i noted above on each PC_i can be divided into n partial data X_i(m) (m is an integer from 0 to n-1) having a size of unit data and can be divided into the block of every consecutive n of the partial data without overlapping;~~

data X_i being divisible into n partial data units X_i(m), m being an integer from 0 to n-1;

data X_i being divisible into n partial data units X_i(k), k being an integer from 0 to n-1;

~~computer PC_k (k is an integer from 0 to n-1) is responsible for the cross-correlation processing of partial data X_i(k) located on each computer PC_i, and further,~~

a computer PC_k, wherein computer PC_k is configured for cross-correlation processing of partial data X_i(k); and

~~in each pair including 2 computers which are connected to be able transmit data via the line concentrator or communications network noted above, mutually between 2 computers which are~~

~~connected;~~

wherein each computer PC_i of said plurality n is configured to exchange a partial data unit with a partner computer chosen from said plurality n of computers.

~~includes data transmission means which repeats steps that computers transmit their allocated partial data to the partner computer which is connected to said computer between each other.~~

13. (currently amended) ~~In the network system~~

A system for the cross-correlation of data, comprising:

~~that n (n is any real number of 2) number of computers PC_i, (integer i represents the number of PC_i from 0 to n-1)~~

a plurality n of computers PC_i, n being a real number which is equal to or greater than 2, and i being an integer from 0 to n-1;

~~are connected to a line concentrator or communications network capable of full duplex transmission with switching function;~~

wherein said plurality n of computers PC_i are communicably coupled via a connector with a switch;

~~the data distribution method is characterized in that each computer PC_i has a storage device that is responsible for storing data X_i (i is an integer from 0 to n-1) that is to be cross correlated;~~

each of said plurality n of computers PC_i further including a storage device configured for storing data X_i;

~~the data X_i noted above on each PC_i can be divided into n partial data X_i(j) (j is an integer from 0 to n-1);~~

data X_i being divisible into n partial data units X_i(j), j being an integer from 0 to n-1;

data X_i being divisible into n partial data units X_i(k), k being an integer from 0 to n-1;

~~computer PC_k (k is an integer from 0 to n-1) is responsible for the cross correlation processing of partial data X_i(k) located on each computer PC_i;~~

a computer PC_k, wherein computer PC_k is configured for cross-correlation processing of partial data X_i(k);

~~and further, in computers which are connected to be able transmit data via the line concentrator~~

~~or communications network noted above;~~

~~_____ wherein each computer PC_i of said plurality n is configured to exchange a partial data unit with a partner computer chosen from said plurality n of computers; and in repeating the step that computers transmit their allocated partial data between the computer which sends data and the computer which receives data, during each step, same computer for sending and same computer for receiving are allocated without overlapping and same computers are allocated without overlapping through all of the steps, and includes data transmission means in which these steps are repeated n-1 times, regardless of whether n being even or odd.~~

~~_____ wherein each computer PC_i of said plurality n is configured to exchange n-1 partial data units with a partner computer; and~~

~~_____ wherein each computer PC_i of said plurality is configured to exchange partial data units with each partner computer once.~~

14. (currently amended) ~~In the network system~~

~~_____ A system for the cross-correlation of data, comprising:~~

~~that n (n is any real number of 2) number of computers PC_i, (integer i represents the number of PC_i from 0 to n-1)~~

~~_____ a plurality n of computers PC_i, n being a real number which is equal to or greater than 2, and i being an integer from 0 to n-1;~~

~~are connected to a line concentrator or communications network capable of full duplex transmission with switching function;~~

~~_____ wherein said plurality n of computers PC_i are communicably coupled via a connector with a switch;~~

~~the data distribution method is characterized in that each computer PC_i has a storage device that is responsible for storing data X_i (i is an integer from 0 to n-1) that is to be cross-correlated;~~

~~_____ each of said plurality n of computers PC_i further including a storage device configured for storing data X_i;~~

~~the data X_i noted above on each PC_i can be divided into n partial data X_i(m) (m is an integer from 0 to n-1) having a size of unit data and can be divided into the block of every consecutive n~~

~~of the partial data without overlapping;~~

data X_i being divisible into n partial data units $X_i(j)$, j being an integer from 0 to $n-1$;

data X_i being divisible into n partial data units $X_i(k)$, k being an integer from 0 to $n-1$;

~~computer PC_k (k is an integer from 0 to $n-1$) is responsible for the cross-correlation processing of partial data $X_i(k)$ located on each computer PC_i ,~~

a computer PC_k , wherein computer PC_k is configured for cross-correlation processing of partial data $X_i(k)$;

~~and further, in computers which are connected to be able transmit data via the line concentrator or communications network noted above, in repeating the step that computers transmit their allocated partial data between the computer which sends data and the computer which receives data, during each step, same computer for sending and same computer for receiving are allocated without overlapping and same computers are allocated without overlapping through all of the steps;~~

wherein each computer PC_i of said plurality n is configured to exchange a partial data unit with a partner computer chosen from said plurality n of computers;

~~and data transmission means in which these steps are repeated $n-1$ times, regardless of whether n being even or odd.~~

wherein each computer PC_i of said plurality n is configured to exchange $n-1$ partial data units with a partner computer; and

wherein each computer PC_i of said plurality is configured to exchange partial data units with each partner computer once.

15. (currently amended) ~~The data distribution method according to one of claims 11 to 14~~
A system as in one of claims 11-14, comprising a ~~that the network medium allows~~ configured
for full duplex communications.